



Title: System and Method for Programmatically Generating a Graphical Program in Response to User Input

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§ Examiner: Vu, Kieu D.
§ Group/Art Unit: 2173
§ Atty. Dkt. No: 5150-48300

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to Commissioner for Patents, Alexandria, VA 22313-1450, on the date indicated below.

Jeffrey C. Hood


Signature

10/12/2005
Date

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As argued in the previous Response, which is hereby incorporated by reference, Ohara does not disclose automatic generation of the graphical program as recited in the present claims (and described in the present application), contrary to the Examiner's assertion. Applicant respectfully directs the Examiner's attention to those arguments, and notes that the Examiner did not address them in the most recent Office Action.

In addition to the arguments presented with respect to Ohara in the previous Response, Applicant provides the following arguments for the allowability of the present claims.

The Examiner admits that Ohara fails to teach "wherein the graphical program comprises...a graphical user interface portion", as well as "wherein said automatically generating the graphical program includes generating the block diagram portion without direct user input specifying the plurality of nodes or connections between the nodes", but asserts that Weeren remedies these admitted deficiencies of Ohara. Applicant respectfully disagrees. For example, the Examiner asserts that Weeren teaches that the (automatically generated) graphical program comprises a graphical user interface portion, citing "VerifyAcct" 402 of Figure 4. However, the cited element (VerifyAcct 402) is not a "graphical user interface portion" at all, but rather is a program icon with multiple returns representing a user-defined subroutine, as clearly described in col. 5:47 – col. 6:4. In fact, the only mention Weeren makes of a graphical user interface (GUI) at all is regarding a GUI for the operating system (col. 4:47-49). Thus, Weeren (and Ohara) fails to disclose this feature of claim 1. The Examiner also asserts that Weeren discloses automatically generating the block diagram portion without direct user input specifying the plurality of nodes or connections between the nodes, citing Figure 6 and col.7:20-30. Applicant respectfully submits that Weeren discloses automatically drawing "arrows" (i.e., connections) associated with new program icons added to the program flow by the user, but does not teach or suggest automatically generating the block diagram portion *without direct user input specifying the plurality of nodes*. For example, the cited text reads:

Flowchart 600 in FIG. 6 illustrates the steps performed in an exemplary embodiment of the present invention. In step 601, a program flow is graphically represented as a plurality of icons connected by at least one arrow. Additional icons are added to the program flow in step 602. The added icons represent a subroutine having overwriteable components that have a functionality which is represented by second arrows that are added in step 603. Other icons can be added to the second arrows in step 604. In step 605, the graphical development program indicates whether the added subroutine has been overwritten.

Note that no mention is made of automatically selecting or specifying icons to add to the flow diagram. In fact, as described in col.2:47-59:

A developer adds functionality to the program flow by adding icons on existing arrows. The graphical development environment automatically adjusts the program flow to include the new icon and its associated arrows.

For example, if *the developer drops an icon representing a loop somewhere between the start and end of the program flow*, the environment automatically inserts the icon into the flow at that point and draws an arrow representing the loop. Subsequently, *the developer can add other language components within the loop merely by dropping those icons on the arrow representing the loop.* (emphasis added)

Thus, in Weeren's system, icons added to the program flow diagram are specifically selected by the user and added/dropped by the user onto arrows in the diagram. In other words, according to Weeren, the user specifically provides direct user input specifying the program icons to be added to the program flow diagram. Thus, Weeren (and Ohara, as admitted by the Examiner) fails to teach or suggest these features and limitations of claim 1.

Thus, Ohara and Weeren, taken singly or in combination, fail to teach all the features and limitations of claim 1, and so claim 1 and those claims dependent therefrom are patentably distinct and non-obvious over Ohara and Weeren, and are thus allowable.

Independent claims 16, 17, 18, 21, and 34 each includes novel limitations that are similar to at least a subset of the patentably distinct and non-obvious features and limitations of claim 1, and so the above arguments apply with equal force to these claims. Moreover, many of these claims include further limitations not taught or suggested by Ohara and Weeren. Thus, for at least the reasons provided above, Applicant submits that Ohara and Weeren, taken singly or in combination, fail to teach all the features and limitations of claims 16, 17, 18, 21, and 34, and so claims 16, 17, 18, 21, and 34, and those claims respectively dependent therefrom, are patentably distinct and non-obvious over Ohara and Weeren, and are thus allowable.

Regarding claim 23, the Examiner admits that Ohara fails to teach "automatically generating the graphical source code as a sub-program of the graphical program without direct user input specifying the plurality of nodes or connections between the nodes, wherein the node represents the sub-program", but asserts that Weeren remedies this admitted deficiency of Ohara. For example, the Examiner asserts that Weeren teaches "automatically generating the graphical source code as a sub-program of the graphical program without direct user input specifying the plurality of nodes or connections between the nodes", citing Figure 6 and col.7:20-30. Applicant respectfully disagrees.

As noted above, Figure 6 and col.7:20-30 and Figure 4 in no way disclose automatically generating the graphical source code as a sub-program of the graphical program *without direct user input specifying the plurality of nodes*. Rather, in both Weeren and Ohara, the nodes to be included in the graphical program/program flow diagram are selected, i.e., specified, by the user.

Thus, for at least the reasons presented above, Applicant submits that Ohara and Weeren, taken singly or in combination, fail to teach all the features and limitations of claim 23, and so claim 23 and those claims dependent therefrom are patentably distinct and non-obvious over Ohara and Weeren, and are thus allowable.

Claims 26 and 46 include similar limitations as claim 23, and so the above arguments apply with equal force to these claims. Thus, for at least the reasons presented above, Applicant submits that Ohara and Weeren, taken singly or in combination, fail to teach all the features and limitations of claims 26 and 46, and so claims 26 and 46, and those claims respectively dependent therefrom, are patentably distinct and non-obvious over Ohara and Weeren, and are thus allowable.

Applicant also submits that the cited references provide no motivation to combine, and notes that the Examiner's suggested motivation, "so that a program can be automatically generated without user's manual connections between nodes" is simply a statement of perceived benefit of the alleged combination, absent any motivation provided by the art itself, and is thus hindsight analysis, which is improper. Applicant further notes that the Examiner's alleged motivation to combine does not even address a primary novel limitation of the claims, specifically, that the nodes/icons are generated without any direct user input specifying the nodes/icons, and so the alleged combination is improper for this reason as well. Moreover, Applicant submits that even were Ohara and Weeren properly combinable, which Applicant argues they are not, the resulting combination would still not produce Applicant's invention as claimed for at least the reason that the references fail to disclose this limitation.

Thus, for at least the reasons provided above, Applicant respectfully submits that the independent claims, and those claims respectively dependent therefrom, are patentably distinct and non-obvious over the cited art, and are thus allowable.

Removal of the 103 rejection of claims 1-7, 10-23, 26, 29-38, 40, 43-46, and 49-53 is respectfully requested.

In light of the foregoing amendments and remarks, Applicant submits the application is now in condition for allowance, and an early notice to that effect is requested. If any extensions of time (under 37 C.F.R. § 1.136) are necessary to prevent the above referenced application(s) from becoming abandoned, Applicant(s) hereby petition for such extensions. If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert & Goetzel PC Deposit Account No. 50-1505/5150-48300/JCH.

Also enclosed herewith are the following items:

- ☒ Return Receipt Postcard
- ☒ Notice of Appeal

Respectfully submitted,



Jeffrey C. Hood
Reg. No. 35,198
ATTORNEY FOR APPLICANT(S)

Date: 10/12/2008 JCH/MSW